

PHYSICS Form 5 Track 1 Marking Scheme

| Question | Answer | Mark | Guidelines |
|----------|---|-----------------------|-----------------------|
| 1a | i. E ii. B iii. C iv. A v. D | 1 1 1 1 1 | |
| 1b | N, °C, cm ³ , s, A | 5 | 1 mark each |
| 2a | Attracted by a magnet iron nails, steel paper clips Not attracted by a magnet glass marbles, plastic bottle, soft toy | 1,1 1,1,1 | |
| 2b | i. magnetic ii. poles, South iii. repulsion iv. North | 1 1,1 1 1 | |
| 3a | i. 14 cm ³ ii. 30 cm ³ iii. 16cm ³ iv. balance v. 2 g/cm ³ | 1 1 1 1 2 | accept 16 accept 2 |
| 3b | i. honey is at the base followed by water then oil ii. less | 3 1 | |
| 4a | i. air resistance, weight ii. Increases, more slowly | 1,1 1,1 | |
| 4b | i. upward force, weight ii. Increases, bigger, pumps out, bigger | 1,1 1,1,1,1 | accept upthrust |
| 5a | i. Students must draw the correct pattern to indicate that the greatest pressure is at the base. ii. Students indicate with an X a point close to the base . | 3 1 | |
| 5b | i. large pressure ii. small pressure iii. large pressure iv. Small pressure | 1 1 1 1 | |
| 5c | pressure, bigger | 2 | |

| | | | |
|-----|---|------------------------|--|
| 6a | Students should label correctly the earth, live and neutral wires | 3 | |
| 6b | i. brown, blue ii. earth iii. fuse | 1,1 1 1 | |
| 6c | i. hair dryer, heater ii. sockets may get wet and increase the chance of a person being electrocuted whilst using it. | 1,1 1 | accept any other suitable answer |
| 7a | i. symbol of fuse ii. the fuse blows iii. 13A | 2 2 2 | |
| 7b | i. symbol for double insulation ii. the casing is made of plastic so it does not need to be earthed iii. plastic | 1 2 1 | |
| 8a | i. correct labelling of turnings, iron core, and battery ii. correct direction of current iii. a switch iv. Increase the current Increase the number of turns | 1,1,1 2 1 1,1 | Instead of 'battery' accept 'cell' |
| 8b | A drawing showing the correct pattern of the magnetic field with clear field lines and arrows drawn to show the direction. | 1,1 | |
| 9a | i. A transformer ii. Step down, because the output voltage is smaller than the input voltage iii. Alternating | 1 1,2 1 | |
| 9b | i. 3 turns, 5 turns ii. 144 V | 1,1 3 | 1 mark is for the correct unit |
| 10a | Radioactivity | 1 | |
| 10b | i. True ii. True iii. False iv. True v. True | 1 1 1 1 1 | |
| 10c | i. radiation ii. dentist iii. sterilisation of surgical instruments, tracers in medicine | 1 1 2 | accept alpha/ beta / gamma accept radiographer, or any worker from the nuclear industry accept any other use : tracers in industry, radiotherapy, thickness control in industry, radioactive dating, generating power. |